STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _10/549,352A_

Source: _IPOP_

Date Processed by STIC: _11/28/06_

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT
MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO **REDUCE** ERRORED SEQUENCE LISTINGS, **PLEASE** USE THE **CHECKER VERSION 4.4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (**<http://www.uspto.gov/ebc/efs/downloads/documents.htm>** , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):**
   U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: $10/549,352$

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics
Wrapped Aminos
The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor **after** creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2 ____ Invalid Line Length The rules require that a line **not exceed** 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino
Numbering
The numbering under each 5th amino acid is misaligned. Do **not** use tab codes between numbers; use **space characters**, instead.

4 ____ Non-ASCII The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**

5 ____ Variable Length Sequence(s) ____ contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0
"bug"
A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

7 ____ Skipped Sequences
(OLD RULES)
Sequence(s) ____ missing. If intentional, please insert the following lines for **each** skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.

8 ____ Skipped Sequences
(NEW RULES)
Sequence(s) ____ missing. If **intentional**, please insert the following lines for **each** skipped sequence.
<210> sequence id number
<400> sequence id number
000

9 ____ Use of n's or Xaa's
(NEW RULES)
Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 ____ Invalid <213>
Response
Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence

11 ____ Use of <220> Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0
"bug"
Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 ____ Misuse of n/Xaa "n" can **only** represent a single <u>nucleotide</u>; "Xaa" can **only** represent a single <u>amino acid</u>

IFWP

RAW SEQUENCE LISTING   DATE: 11/28/2006
PATENT APPLICATION: US/10/549,352A   TIME: 14:28:06

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Output Set: N:\CRF4\11282006\J549352A.raw

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 4         PAINE, Jacqueline Ann Mary
 5         SHIPTON, Catherine Ann
 7 <120> TITLE OF INVENTION: Enhanced Accumulation of Carotenoids in Plants
 9 <130> FILE REFERENCE: 70237USPCT
11 <140> CURRENT APPLICATION NUMBER: US 10/549,352A
12 <141> CURRENT FILING DATE: 2005-09-14
14 <150> PRIOR APPLICATION NUMBER: PCT/GB2004/001241
15 <151> PRIOR FILING DATE: 2004-03-24
17 <150> PRIOR APPLICATION NUMBER: US60/457,053
18 <151> PRIOR FILING DATE: 2003-03-22
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[Handwritten annotations:]
Pls explain source of genetic material.

Invalid response

See item#11 on error summary sheet.

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365 tagctttaac tgataatctg attactttat ttcgtgtgtc tttgatcatc ttgatagtta 4080
367 cagaaccgtc gactctagag aagccattta atcgccgcc accatggcca tcatactcgt 4140
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RAW SEQUENCE LISTING   DATE: 11/28/2006
PATENT APPLICATION: US/10/549,352A   TIME: 14:28:06

Input Set : E:\70237USPCT Second Substitute Seq List.txt
Output Set: N:\CRF4\11282006\J549352A.raw

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369 acgagcagcg tcgccggggc tctccgccgc cgacagcatc agccaccagg ggactctcca      4200
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373 ccttggcctc cacccgtggg aggctggccg tccctccccc gccgtctact ccagcctcgc      4320
375 cgtcaacccg gcgggagagg ccgtcgtctc gtccgagcag aaggtctacg acgtcgtgct      4380
377 caagcaggcc gcattgctca aacgccagct cgcgcacgcc gtcctcgacg ccaggcccca      4440
379 ggacatggac atgccacgca acgggctcaa ggaagcctac gaccgctgcg gcgagatctg      4500
381 tgaggagtat gccaagacgt tttacctcgg aactatgttg atgacagagg agcggcgccg      4560
383 cgccatatgg gccatctatg tgtggtgtag gaggacagat gagcttgtag atgggccaaa      4620
385 cgccaactac attacaccaa cagctttgga ccggtgggag aagagacttg aggatctgtt      4680
387 cacgggacgt ccttacgaca tgcttgatgc cgctctctct gataccatct caaggttccc      4740
389 catagacatt cagccattca gggacatgat tgaagggatg aggagtgatc ttaggaagac      4800
391 aaggtataac aacttcgacg agctctacat gtactgctac tatgttgctg gaactgtcgg      4860
393 gttaatgagc gtaccagtga tgggcatcgc atccgagtct aaagcaacaa ctgaaagcgt      4920
395 gtacagtgct gccttggctc tcggaattgc gaaccaactc acgaacatac tccgggatgt      4980
397 tggagaggat gctagacgag gaaggatata tttaccacaa gatgagcttg cacaggcagg      5040
399 gctctctgat gaggacatct tcaaaggggt cgtcacgaac cggtggagaa acttcatgaa      5100
401 gaggcagatc aagagggcca ggatgttttt tgaggaggca gagagagggg taactgagct      5160
403 ctcacaggct agcagatggc cagtatgggc ttccctgttg ttgtacaggc agatcctgga      5220
405 tgagatcgaa gccaacgact acaacaactt cacgaagagg gcgtatgttg gtaaagggaa      5280
407 gaagttgcta gcacttcctg tggcatatgg aaaatcgcta ctgctcccat gttcattgag      5340
409 aaatggccag acctagggcc atgcaggccg atccccgatc gttcaaacat ttggcaataa      5400
411 agtttcttaa gattgaatcc tgttgccggt cttgcgatga ttatcatata atttctgttg      5460
413 aattacgtta agcatgtaat aattaacatg taatgcatga cgttatttat gagatgggtt      5520
415 tttatgatta gagtcccgca attatacatt taatacgcga tagaaaacaa aatatagcgc      5580
417 gcaaactagg ataaattatc gcgcgcggtg tcatctatgt tactagatcg                  5630
420 <210> SEQ ID NO: 3
421 <211> LENGTH: 5180
422 <212> TYPE: DNA
423 <213> ORGANISM: Artificial Sequence
425 <220> FEATURE:
426 <223> OTHER INFORMATION: 12422
428 <400> SEQUENCE: 3
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431 tattctgtag tacagacaaa actaaaagta atgaaagaag atgtggtgtt agaaaaggaa      120
433 acaatatcat gagtaatgtg tgagcattat gggaccacga aataaaaaga acattttgat      180
435 gagtcgtgta tcctcgatga gcctcaaaag ttctctcacc ccggataaga aacccttaag      240
437 caatgtgcaa agtttgcatt ctccactgac ataatgcaaa ataagatatc atcgatgaca      300
439 tagcaactca tgcatcatat catgcctctc tcaacctatt cattcctact catctacata      360
441 agtatcttca gctaaatgtt agaacataaa cccataagtc acgtttgatg agtattaggc      420
443 gtgacacatg acaaatcaca gactcaagca agataaagca aaatgatgtg tacataaaac      480
445 tccagagcta tatgtcatat tgcaaaaaga ggagagctta aagacaagg catgactcac        540
447 aaaaattcat ttgcctttcg tgtcaaaaag aggagggctt acattatcc atgtcatatt        600
449 gcaaaagaaa gagagaaaga acaacacaat gctgcgtcaa ttatacatat ctgtatgtcc      660
451 atcattattc atccaccttt cgtgtaccac acttcatata tcatgagtca cttcatgtct      720
453 ggacattaac aaactctatc ttaacattta gatgcaagag cctttatctc actataaatg      780
455 cacgatgatt tctcattgtt tctcacaaaa agcattcagt tcattagtcc tacaacaacg      840
457 aattcggctt cccaaatcgc cgccaccatg gcttctatga atcctcttc cgctgtgaca       900
459 acagtcagcc gtgcctctag ggggcaatcc gccgcagtgg ctccattcgg cggcctcaaa      960
461 tccatgactg gattcccagt gaagaaggtc aacactgaca ttacttccat tacaagcaat      1020
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(handwritten annotations on the page: "12422" circled; "same error"; and a boxed note)

The type of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

VERIFICATION SUMMARY   DATE: 11/28/2006
PATENT APPLICATION: US/10/549,352A   TIME: 14:28:07

Input Set : E:\70237USPCT Second Substitute Seq List.txt
Output Set: N:\CRF4\11282006\J549352A.raw